IN THE CLAIMS

1. (Original): A method for producing flavor-active terpenes from terpene hydrocarbons by means of a selective biotransformation and using microorganisms of the ascomycetes, basidiomycetes and deuteromycetes classes, wherein a lyophilized mycel is used which is firstly rehydrated and then mixed with the substrate.

2. (Original): The method as claimed in Claim 1, wherein the mycel cells are additionally permeated by ultrasonic treatment and/or extrusion.

3. (Previously Amended): The method as claimed in Claim 1, wherein the biotransformation is carried out in a submerged culture.

4. (Previously Amended): The method as claimed in Claim 1, wherein the biotransformation is carried out in an enantioselective, a stereoselective and/or a regioselective manner.

5. (Previously Amended): The method as claimed in Claim 1, wherein representatives of Fusarium, Pleurotus, Penicillium and Chaetomium are used as the microorganisms.

6. (Previously Amended): The method as claimed in Claim 5, wherein Fusarium proliferatus, Pleurotus sapidus, Penicillium citrinum and Chaetomium globosum are used as the microorganisms.

7. (Previously Amended): The method as claimed in Claim 1, wherein mono- and sesquiterpenes are used as the terpene hydrocarbons.

8. (Previously Amended): The method as claimed in Claim 1, wherein limonene, pinene, valencene, farnesene, thymol and dimethyl allyl alcohol are used as the terpene hydrocarbons.

9. (Previously Amended): The method as claimed in Claim 8, wherein R-(+) limonene or S-(-) limonene are used as the terpene hydrocarbons.

10. (Previously Amended): The method as claimed in Claim 1, wherein before the biotransformation an enzyme induction is carried out in the lyophilized mycel by an addition of substrate.

11. (Previously Amended): The method as claimed in Claim 1, wherein the biotransformation is carried out in a two-phase system.

12. (Original): The method as claimed in Claim 11, wherein the biotransformation is carried out in a two-phase system without co-solvents.

13. (Previously Amended): The method as claimed in Claim 1, wherein the biotransformation is carried out in a medium with a reduced quantity M of carbon source.

14. (Original): The method as claimed in Claim 13, wherein the reduced quantity M of carbon source M is $< 50\ gL^{-1}$.

15. (Previously Amended): The method as claimed in Claim 1, wherein the reaction is carried out in a stirred tank, surface or fixed bed reactor.

16. (Previously Amended): The method as claimed in Claim 1, wherein terpenoid alcohols, epoxides, aldehydes, ketones, multiple alcohols, carbonyls and carbonyl alcohols are obtained as the flavor-active terpenes.

17. (Previously Amended): The method as claimed in Claim 16, wherein piperitone, isopiperitone, isopiperitenol, isopiperitenone, perillaaldehyde, carvone, carveol, linalool, linalool oxide, terpineol and nootkatol and nootkatone are obtained.

18. (Previously Amended): The method as claimed in Claim 1, wherein the transformation products are isolated from cellular compartments or fractions.

19. (Previously Amended): The method as claimed in Claim 1, wherein firstly R-(+)-limonene is biotransformed in an enantioselective manner to cis-(+)-carveol and S-(-)-limonene is biotransformed in an enantioselective manner to trans-(-)-carveol and subsequently trans-(-)-carveol to R-(-)-carvone.

20. (Previously Amended): The method as claimed in Claim 19, wherein the enantioselective biotransformation of R-(+)-limonene to cis-(+)-carveol is carried out with Fusarium species as the biocatalyst.

21. (Original): The method as claimed in Claim 19, wherein the enantioselective transformation of trans-(-)-carveol to R-(-)-carvon is carried out with Pleurotus spec. as the biocatalyst.

22. (Previously Amended): The method as claimed in Claim 1, wherein bicyclic sesquiterpenes are transformed to β-nootkatol and subsequently to nootkatone.

23. (Previously Amended): The method as claimed in Claim 22, wherein the transformation of bicyclic sesquiterpenes to β-nootkatol and subsequently to nootkatone is carried out with Chaetomium species.